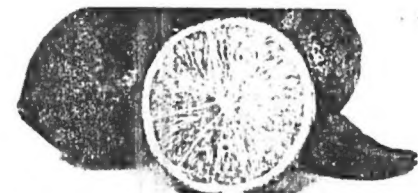


Lime Burning

LIME is a rounded fruit that is pointed at both ends. It is greener than the lemon, to which it is related. It grows on a small citrus tree.



J. HORACE McFARLAND

The Sharp, Sour Flavor of the Lime gives zest to beverages. Lime is also used in ice cream, sherbet, and other foods.

drink called *limcade* is prepared from limes in the same way that lemonade is prepared from lemons.

Scientific Classification. Lime trees belong to the rue family, *Rutaceae*. They are classified as genus *Citrus*, species *C. aurantifolia*.

WILLIAM GREENE

LIME is a coarse, white, solid substance that has many industrial uses. It is very *caustic* (strongly alkaline), and can rapidly destroy animal and plant tissues. It is often used to treat waste materials. Lime is also called *quicklime* because of its strong chemical action. Lime swells when it is mixed with water, and may become hot enough to boil the water.

Manufacturers often use it as a raw material to make other chemical compounds. For example, calcium carbide, used to produce acetylene gas for welding, is often

BUSHEL is the common measure of bulky articles of commerce. It is equal to 4 pecks, or 32 U.S. dry quarts. The standard bushel in the United States contains 2,150.42 cubic inches (35.21 liters). It is equal in capacity to a cylinder 8 inches (20 centimeters) deep and 18½ inches (47 centimeters) in diameter, interior measure. A bushel of any substance has a certain weight. For example, a bushel of shelled corn weighs 56 pounds (25.4 kilograms). Thus, the term *bushel* is actually a measure of weight for many crops.

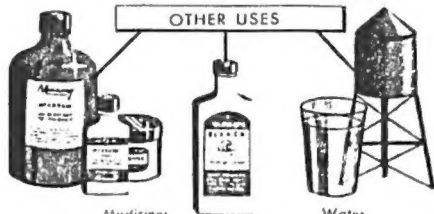
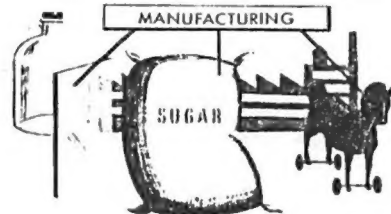
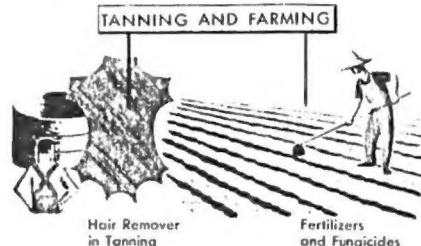
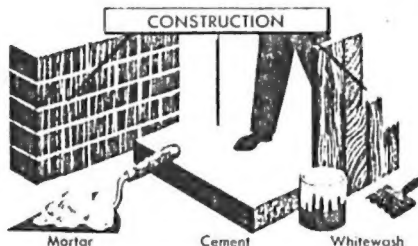
E. G. STRAUSS

See also **WEIGHTS AND MEASURES**.



Calavo Growers of California
Limes Grow in Clusters.

USES OF LIME



made by heating a mixture of lime and carbon in an electric furnace. When lime reacts with water, it forms calcium hydroxide, also called *slaked lime*.

Slaked lime is inexpensive and has many uses. Large quantities of it are used in manufacturing certain kinds of glass, and in making steel. Industries also use slaked lime to help refine sugar, and to make bleaching powder, fungicides, and some nitrogen-rich fertilizers. Farmers spread it on their fields to neutralize soils that have become too acid. It is also used to produce cement, mortar, and whitewash. Some industrial plants use it to purify and soften water. Slaked lime is also used to remove the hair from animal hides in the tanning process to make leather.

Lime which has been exposed to moist air for several days absorbs water, and changes to calcium hydroxide. The compound made in this way is called *air-slaked lime*. Another material, milk of lime, is a mixture of limewater and undissolved slaked lime.

Manufacturers produce lime from crushed limestone. They place the broken pieces of limestone at one end of a revolving, tube-shaped *kiln* (oven). Gas flames heat the limestone to about 1650° F. (899° C) as it moves through the kiln. At this temperature, the limestone changes into lime and carbon dioxide gas.

Lime is an oxide of the metal calcium, and has the chemical formula CaO . It is a strong *base* which readily neutralizes acids. When slaked lime is dissolved in water, it produces limewater. Limewater is used to indicate the presence of carbon dioxide. If carbon dioxide gas is bubbled through limewater, the clear liquid turns milky-white.

OTTO THEODOR BENNY

See also **CALCIUM**; **GLASS** (Soda-Lime Glass); **LEATHER** (Unhairing); **LIMESTONE**.

